

PJM Capacity Model

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Capacity

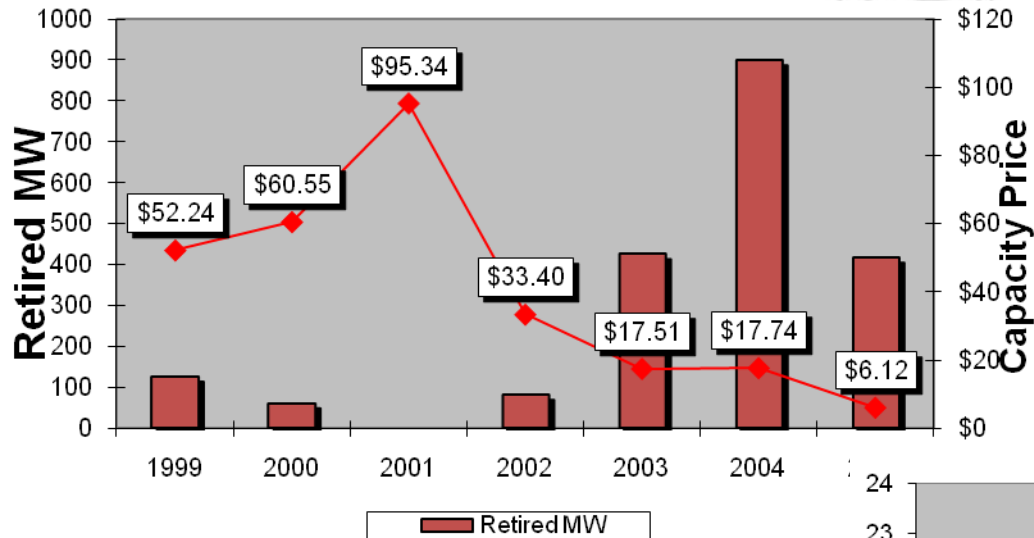
- A commitment of a resource to provide energy during PJM emergency.
- Capacity revenues paid to committed resource whether or not energy is produced by resource.
- Long-term commitment
- Daily product

Energy

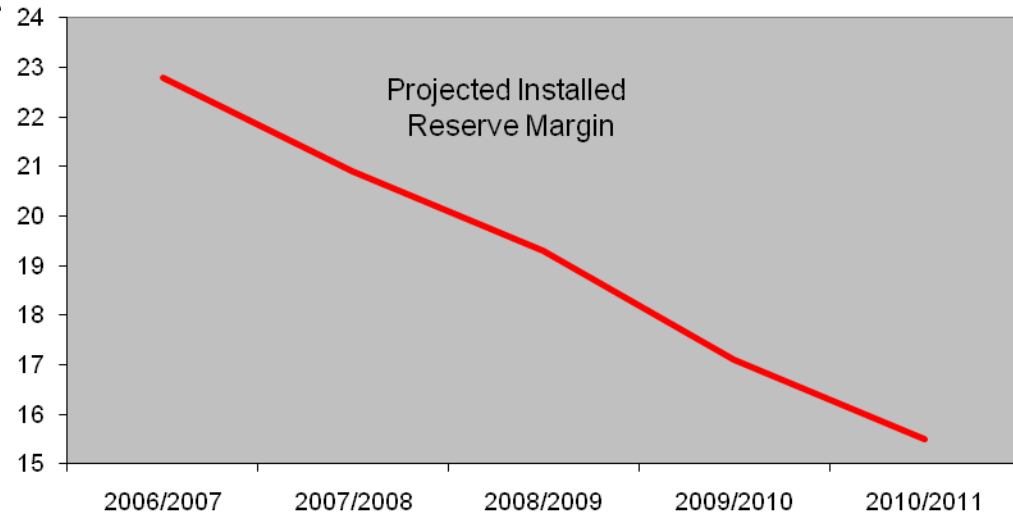
- Generation of electric power over a period of time
- Energy revenues paid to resource based on participation in Day-Ahead or Real-Time energy market
- Daily / hourly commitment
- Hourly or real-time product
- \$1000 / MWh offer cap

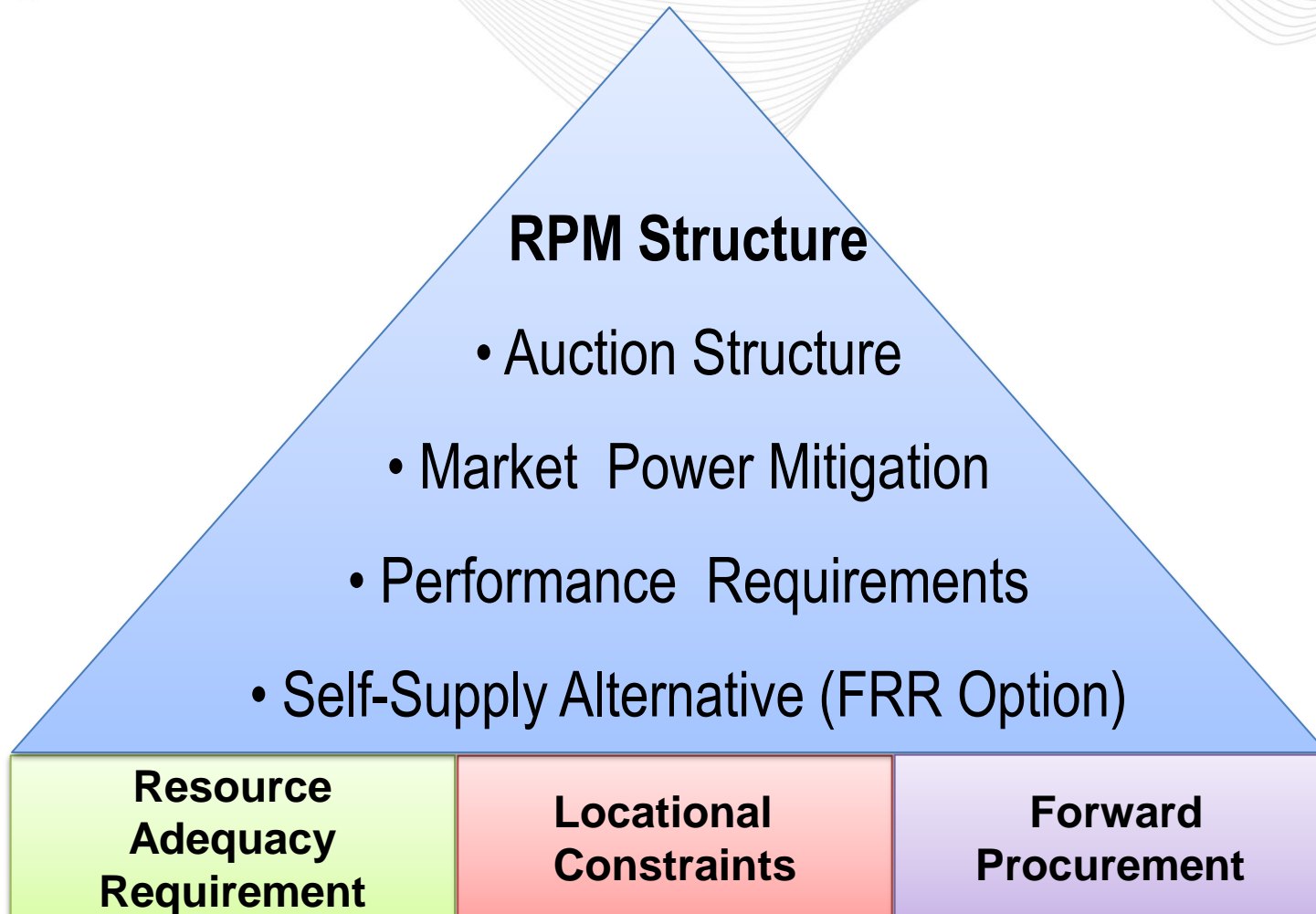
Capacity, energy & ancillary services revenues are expected, in the long term, to meet the fixed and variable costs of generation resources to ensure that adequate generation is maintained for reliability of the electric grid.

Decreasing Prices / Increasing Generation Retirement



Decreasing Reserve Margin / Increasing Reliability Violations





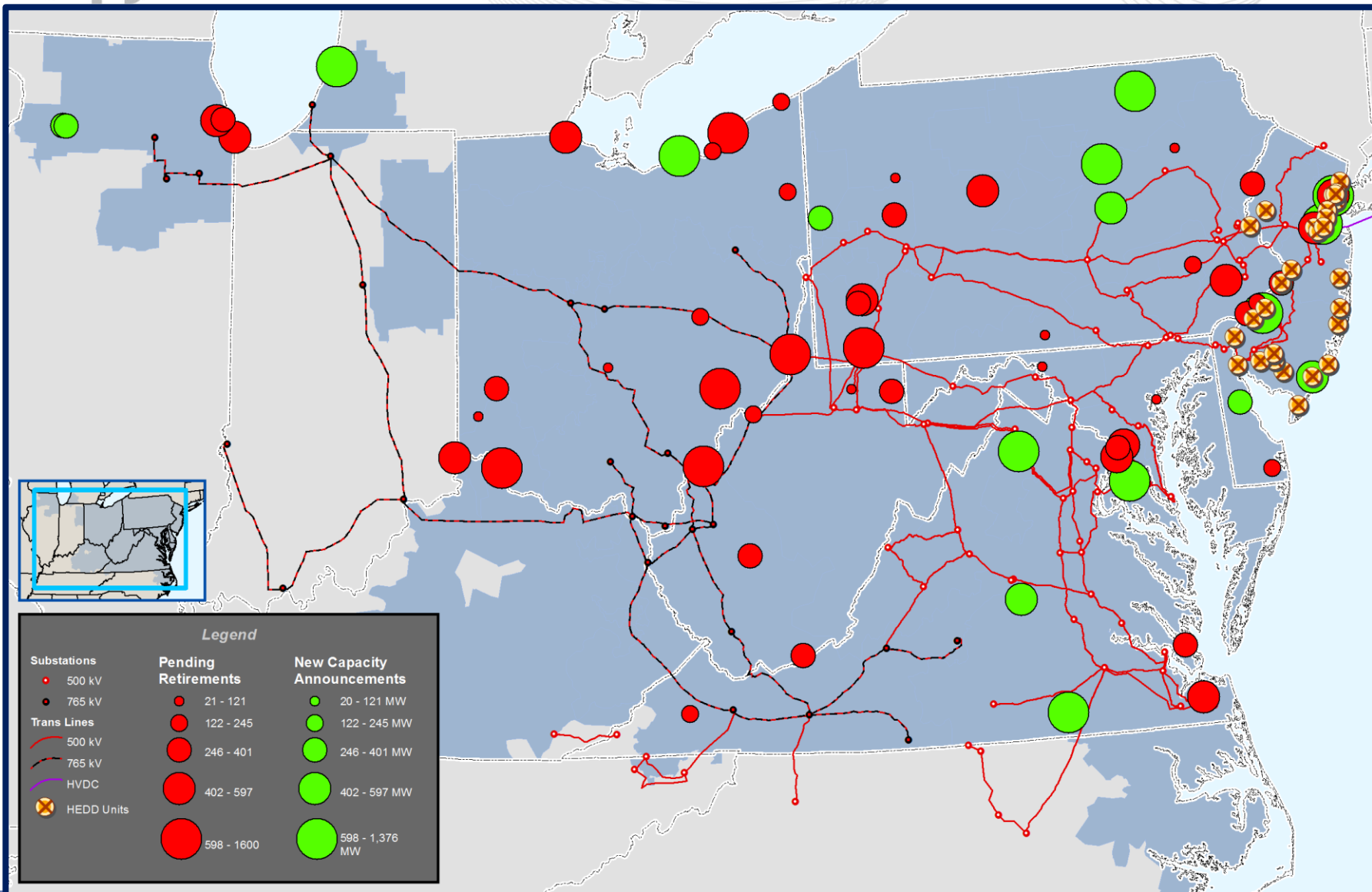
PJM Capacity Market is designed to ensure adequate availability of resources that can be called upon to ensure the reliability of the electric grid.

Market Results

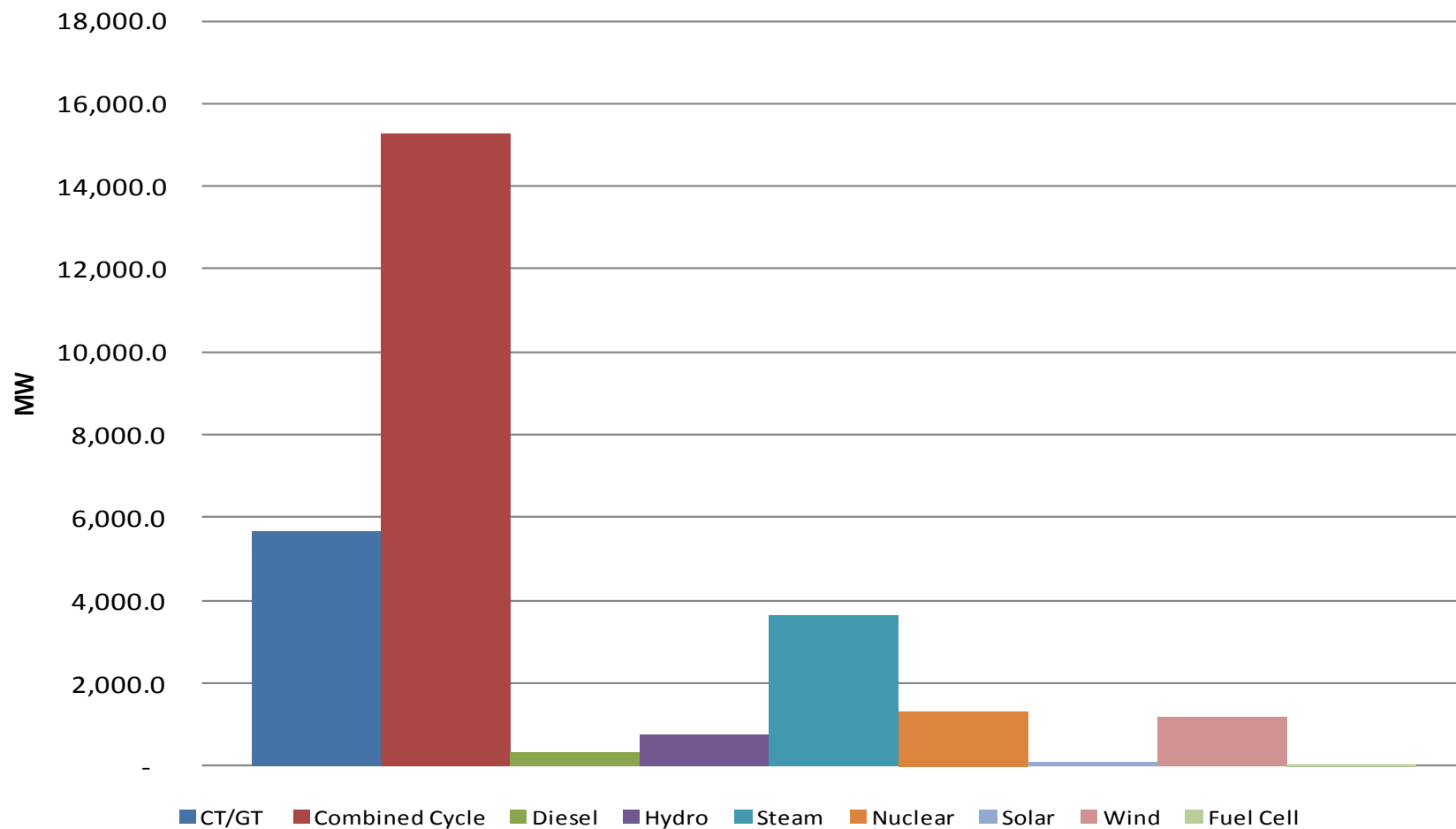
Forward capacity auction format has been in place since 2007.

Ten annual base auctions have been conducted through 2016/17.

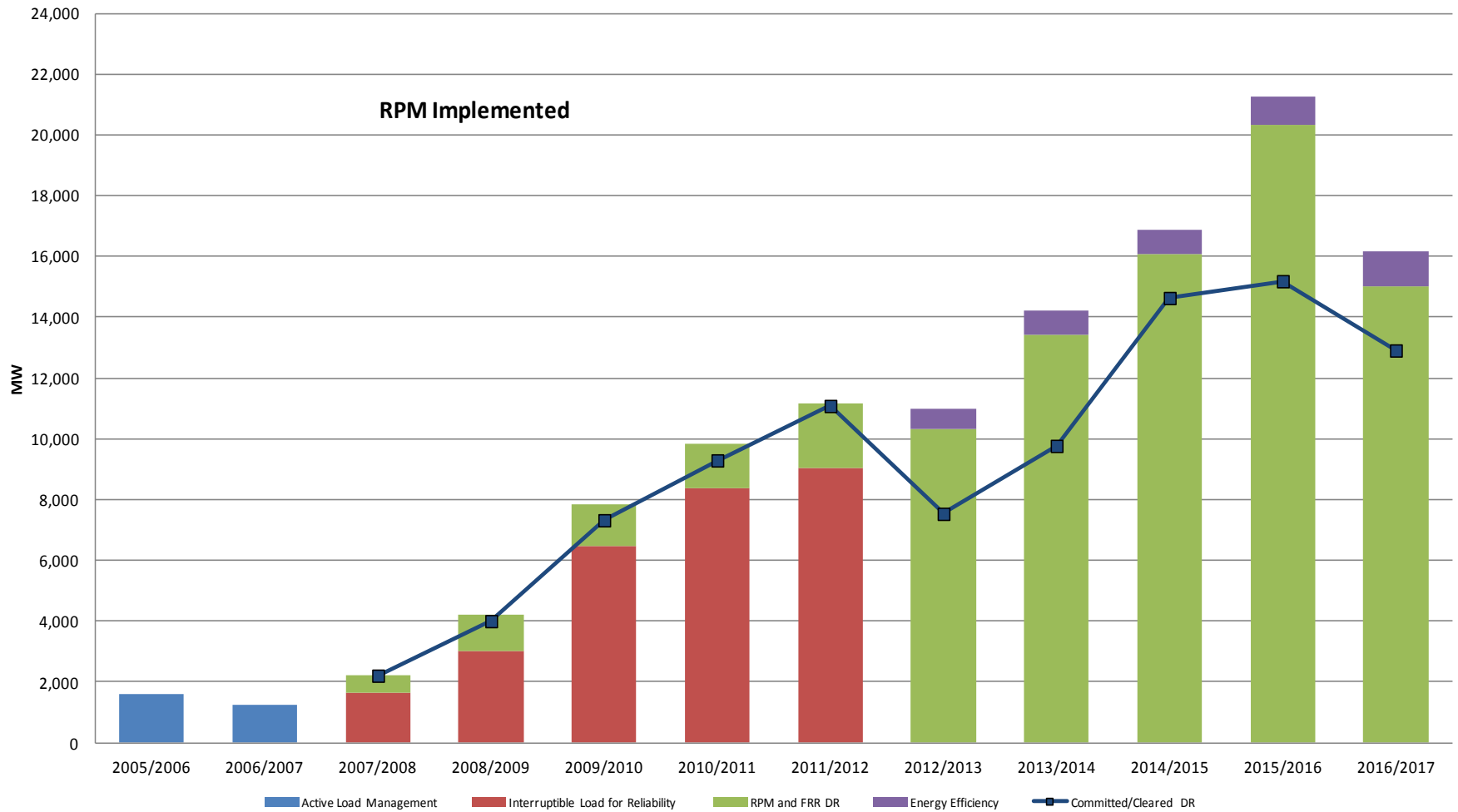
- RPM has achieved resource adequacy – reserve margins consistently in excess of requirements
- Prices have been consistent with market conditions – prices are lower in areas with excess capacity and higher where reserve margins are smaller
- RPM has reduced costs by fostering competition – RPM has attracted investment that has resulted in an efficient mix of resources
- RPM has enabled cost-effective response to environmental rules – demand response and the shift to natural gas are prime examples



Cumulative Generator Capacity Additions

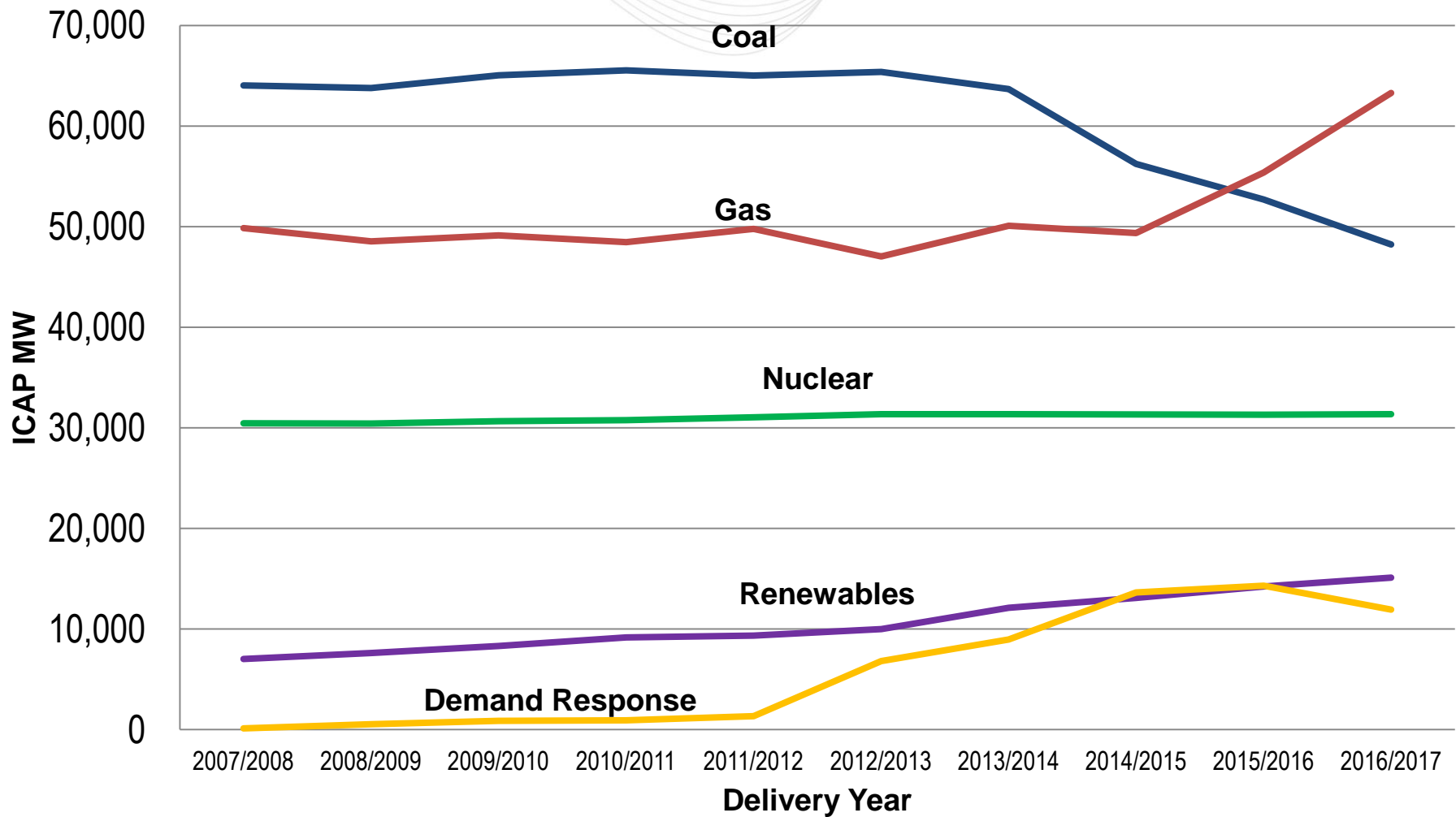


Demand Side Participation in Capacity Market



Evolving Supply Mix in PJM Capacity Market

Cleared Installed Capacity



- Establishing Import Limits
- Allowing Annual Resources to clear against the downward sloping demand
- Ensuring forward commitments are physical
- Enhancing Demand Response operational characteristics